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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,845	07/24/2003	Kunio Yokoi	01-448	9542
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EXAMINER				
RIDER, JUSTIN W				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/625,845

**Applicant(s)**

YOKOI ET AL.

**Examiner**

JUSTIN W. RIDER

**Art Unit**

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 January 2008 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 9-10 and 15-16 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-7 and 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi (JP-A-H11-119792)** referred to as **Yamaguchi** hereinafter in view of **Everhart (US Patent No. 6,230,138 B1)** referred to as **Everhart** hereinafter.

**Claim 1:** **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user, comprising:

i. a recognizable voice command storing means for storing, as speech recognition data (paragraph [0010], *'about the recognition result of a voice command,'*), a plurality of commands that are used to operate the target device (abstract, paragraphs [0009] - [0010], also an inherent feature of a voice command system is the ability to control a target device.) as voice [speech] recognition data (paragraph [0010]);

ii. a voice [speech] recognition means for recognizing the voice command inputted by the user as one of the commands stored in the recognizable voice command storing means (paragraph [0009]); and

iii. a message output means for outputting a message (paragraph [0010], *'and the talk back to which it urges using a \*\*\*\* command instead of said similar type command...'*);

iv. a function setting detection means for detecting a function setting of the target device (paragraph [0012], system determines current condition of device in which user command is intended including environmental issues (e.g. whether windows are up, day or night conditions, etc...)).

However, **Yamaguchi** fails to, but **Everhart** does specifically disclose a command executability determination means for determining executability of the voice command inputted by the user in the function setting detected by the function setting detection means and for providing, by the message output means, a correct usage of the voice command inputted by the user when the voice command is determined inexecutable in the function setting detected currently and is executable in a different function setting of the target device (col. 4, lines 20-42, *'Additionally, the commands can activate pre-recorded speech files or synthesized voice*

*messages...outputting to a vehicle audio system 77 audible feedback to occupants about the functions or states of the accessories being controlled.* ' [emphasis supplied]).

Therefore, it would have been obvious to one possessing ordinary skill in the art at the time of invention to include the teachings of **Everhart** in the system of **Yamaguchi** because it 'provides an in-vehicle speech recognition system capable of accurately recognizing speech from vehicle occupants at different cabin locations. The system of the present invention includes multiple speech engines having different recognition characteristics and/or active grammar sets. This allows the system of the present invention to accommodate different acoustic characteristics of various cabin locations and make available different voice operable accessories and accessory-functions at each cabin location' (Col. 1, lines 55-64).

Claim 2: **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user as per claim 1 above, wherein:

i. the command executability determination means includes a relational command list (It is noted that a relational command list is a list that provides a normal command as well as other related 'acceptable' commands for executing the same function) provided to each command (paragraph [0015], paragraph [0021], 'comparing a user's voice data with each of *two or more standard* voice data prepared in the storage section 19,' [emphasis added]);

ii. the message output means outputs a message for notifying the user of an executable command, executability of which in a current function setting detected by the function setting detection means is determined with reference to the relational command list in addition to outputting a message about a proper usage of the command (paragraph [0022] shows where confirmation messages are given to a user based on normal commands.).

Claim 3: **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user as per claim 1 above, further comprising a substitution determination means for substituting the inexecutable command with a command that is executable in the function setting of the target device (paragraph [0024], **Yamaguchi** determines when an inexecutable command is issued and based on a list of related commands, gives the user an option of substitution commands to carry out.), wherein the message output means outputs a message for notifying the user that the voice command is substituted with the executable command (paragraph [0015], 'When it has a speech synthesis means...').

Claim 4: **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user as per claim 3 above, wherein:

- i. the substitution determination means comprises a relational command list including related commands listed for each command (paragraph [0021], 'comparing a user's voice data with each of *two or more standard* voice data prepared in the storage section 19,' [emphasis added]); and
- ii. the substituted command is selected from the relational command list (paragraph [0026], 'the dictionary storage section 19 for recognition is equivalent to the *similar command storage means* of this invention,' [emphasis added]).

Claim 6: **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user as per claim 3 above, wherein the substitution determination means confirms an intention of the user for execution of the substituted command (paragraph [0029]).

Claim 7: **Yamaguchi** discloses a system for equipment control based on voice control commands input from a user as per claim 6 above, wherein:

i. the substitution determination means comprises a confirmation-required command list including commands that require confirmation of an intention of the user for execution of a substituted command and wherein the substitution determination means refers to the confirmation-required command list when determining whether the substituted command requires the confirmation (paragraphs [0037] – [0039], **Yamaguchi** discloses a system of codes which determine whether or not commands need confirmation, are forbidden or if a normal command is being established.).

Claim 9: **Yamaguchi** discloses a voice control method for controlling a target device [ECU et al] mounted in a vehicle (it is inherent that if an ECU controls automated functionality within a vehicle, that it would be mounted in said vehicle.), comprising:

i. recognizing the voice command inputted by the user as one of predetermined commands to be used in operating the target device, the predetermined commands being stored in a recognizable voice command storage (abstract, '*A voice command that a user voices is recognized by a voice recognition part 18.*');

ii. detecting a current operating condition of the target device (abstract, '*a body ECU 30 determines whether the command execution is allowed or inhibited according to current travel conditions.*' [emphasis supplied]);

iii. determining whether the voice command inputted by the user is executable under the detected current operating condition of the target [ECU] device (abstract, '*a body ECU 30 determines whether the command execution is allowed or inhibited according to current travel conditions.*');

iv. notifying a method of correct usage of the voice command inputted by the user when the voice command inputted by the user is determined inexecutable under the detected operating condition (abstract, *'when the execution is inhibited, a talkback accelerating revoicing using a rephrasing command is made...'*).

However, **Yamaguchi** fails to, but **Everhart** does specifically disclose wherein attempted commands are executable under operating conditions other than that of a current condition (col. 4, lines 35-42, discloses wherein certain conditions allow certain occupants to dictate voice commands whereas some cannot (e.g. a rear passenger cannot adjust a rear-view mirror)).

Therefore, it would have been obvious to one possessing ordinary skill in the art at the time of invention to include the teachings of **Everhart** in the system of **Yamaguchi** because it 'provides an in-vehicle speech recognition system capable of accurately recognizing speech from vehicle occupants at different cabin locations. The system of the present invention includes multiple speech engines having different recognition characteristics and/or active grammar sets. This allows the system of the present invention to accommodate different acoustic characteristics of various cabin locations and make available different voice operable accessories and accessory-functions at each cabin location' (Col. 1, lines 55-64).

Claim 10: **Yamaguchi** discloses prohibiting execution of the voice command inputted by the user when the voice command inputted by the user is determined inexecutable under the detected operating condition (paragraph [0034]).

However, **Yamaguchi** fails to, but **Everhart** does specifically disclose a vehicle navigation system (col. 3, lines 49-50) notifying a method of current usage of the voice



command in a different operating condition of the target device if the voice command is executable in the different operating condition of the target device (col. 4, lines 20-42, *'Additionally, the commands can activate pre-recorded speech files or synthesized voice messages...outputting to a vehicle audio system 77 audible feedback to occupants about the functions or states of the accessories being controlled.'* [emphasis supplied]), the method of correct usage including the different operating condition (col. 4, lines 35-42, discloses wherein certain conditions allow certain occupants to dictate voice commands whereas some cannot (e.g. a rear passenger cannot adjust a rear-view mirror)).

Therefore, it would have been obvious to one possessing ordinary skill in the art at the time of invention to include the teachings of **Everhart** in the system of **Yamaguchi** because it 'provides an in-vehicle speech recognition system capable of accurately recognizing speech from vehicle occupants at different cabin locations. The system of the present invention includes multiple speech engines having different recognition characteristics and/or active grammar sets. This allows the system of the present invention to accommodate different acoustic characteristics of various cabin locations and make available different voice operable accessories and accessory-functions at each cabin location' (Col. 1, lines 55-64).

The remaining limitations of claim 10 are similar in scope and content to that of claim 9 above and so therefore are rejected under the same rationale.

Claims 11, 13 and 15: **Yamaguchi** discloses a system and method for equipment control based on voice control commands input from a user as per claims 1, 9 and 10 above, wherein the function setting detection means of the target device detects function settings by interrupting the

operation of the target device (paragraphs [0013] - [0015], stopping forbidden actuation actions.).

Claims 12, 14 and 16: **Yamaguchi** discloses a system and method for equipment control based on voice control commands input from a user as per claims 1, 9 and 10 above, wherein the command executability determination means further sends a signal to execute the command when the voice command inputted by the user is determined to be executable under the function setting detected currently, and wherein the function setting of the target device is changed by executing the command (paragraphs [0013] - [0015]).

Claims 17 and 18: **Yamaguchi** discloses a system and method as per claims 1 and 9 above, however failing to, but **Everhart** does specifically disclose wherein the target device is a navigation system (col. 3, lines 49-50) and commands are used to change the function setting of the target device (Abstract).

Therefore, it would have been obvious to one possessing ordinary skill in the art at the time of invention to include the teachings of **Everhart** in the system of **Yamaguchi** because it 'provides an in-vehicle speech recognition system capable of accurately recognizing speech from vehicle occupants at different cabin locations. The system of the present invention includes multiple speech engines having different recognition characteristics and/or active grammar sets. This allows the system of the present invention to accommodate different acoustic characteristics of various cabin locations and make available different voice operable accessories and accessory-functions at each cabin location' (Col. 1, lines 55-64).

Claim 19: **Yamaguchi** discloses a method as per claim 10 above, however failing to, but **Everhart** does specifically disclose wherein commands are used to change the function setting of the target device (Abstract).

Therefore, it would have been obvious to one possessing ordinary skill in the art at the time of invention to include the teachings of **Everhart** in the system of **Yamaguchi** because it 'provides an in-vehicle speech recognition system capable of accurately recognizing speech from vehicle occupants at different cabin locations. The system of the present invention includes multiple speech engines having different recognition characteristics and/or active grammar sets. This allows the system of the present invention to accommodate different acoustic characteristics of various cabin locations and make available different voice operable accessories and accessory-functions at each cabin location' (Col. 1, lines 55-64).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi**, in view of **Everhart** and in further view of **Lewis et al. (USPN 6,345,254)** referred to as **Lewis** hereinafter.

Claim 5: **Yamaguchi**, in view of **Everhart** discloses a system for equipment control based on voice control commands input from a user as per claim 1 above, however, **Yamaguchi**, in view of **Everhart** fails to, but **Lewis** does, distinctly disclose wherein the substitution determination means stores a frequency in use of each command expressed by a total number of times that each command has been used by the user and the substituted command is selected based on the frequency (col. 5, lines 5-13, 'to create new or truncated speech commands based

on the frequency in which certain command combinations are used;’ **Lewis** uses these frequency measures of certain commands in order to provide specific commands based on higher usage.).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Lewis** in the system of **Yamaguchi**, in view of **Everhart** because event or frequency based methods of improving voice command systems utilizing voice recognition allow for an improvement in accuracy by ‘tightening’ the constraints to a more user-specific command base (**Lewis**, col. 2, lines 10-29).

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi**, in view of **Everhart** and in further view of **Sawada (USPN 5,754,430)** referred to as **Sawada** hereinafter.

Claim 8: **Yamaguchi**, in view of **Everhart** discloses a system for equipment control based on voice control commands input from a user as per claim 1 above, however, **Yamaguchi**, in view of **Everhart** fails to, but **Sawada** does, distinctly disclose wherein the voice control system is used for a vehicle navigation system having a voice control function (col. 3, lines 44-47, in the car navigation system...using a voice recognition device,’).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Sawada** in the system of **Yamaguchi**, in view of **Everhart** because it provides ‘a car navigation system for guiding and navigating a car along a suitable route extending to a destination on the basis of place names,’ (**Sawada**, col. 2).

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Lee (US Patent No. 5,983,189)** discloses a device for controlling a vehicle according to voice commands.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN W. RIDER whose telephone number is (571)270-1068. The examiner can normally be reached on Monday - Friday 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W. R./  
Examiner, Art Unit 2626  
01 April 2008

/David R Hudspeth/  
Supervisory Patent Examiner, Art Unit 2626